

REMARKS

Pending Claims

Claims 1-28, 33-60, and 97-116 are pending in the application. Claims 29-32 and 61-96 were previously canceled. Claims 1-4, 8, 13-16, 22-25, 27-28, 97-104, 111-112, 114, and 116 have been amended. No new matter has been added.

Claim Rejections – 35 U.S.C. § 112, first paragraph

Claims 1, 13, 15, 23, 24, 33, 97, 101, and 112 stand rejected under 35 U.S.C. § 112, first paragraph because the claims contain subject matter which was not described in the specification in such a way to indicate that the inventor(s) had possession of the claimed invention. The Examiner indicated that the phrase “automatically modifying the weight of at least one of the plurality of rules based on the result” is not disclosed in the specification.

It is not necessary under US patent law that the phrase “automatically modifying the weight of at least one of the plurality of rules based on the result” be found verbatim in the original specification in order to satisfy Section 112. MPEP 2163 states that “there is no *in haec verba* requirement” to support added claim limitations, but that newly-added claim limitations may be supported by “express, implicit, or inherent disclosure.”

With regard to the present application, the originally-filed specification discloses embodiments of the invention in which a computer-based system modifies the weights of rules based on results of financial transactions and therefore provides “express, implicit, or inherent support” for “automatically modifying the weight of at least one of the plurality of rules based on the result.” The Detailed Description provides an extensive discussion of a computer system, termed the information handling system (“IHS”), for executing processes and performing operations related to the methods and systems of the invention. See originally-filed specification at page 2, line 18 through page 4, line 21; see also Figure 2. The Detailed Description also discloses that, among the other capabilities, the IHS can perform an adaptive weighting and threshold adjustment process. See originally-filed specification at page 5, lines 16-24; see also Figure 3. Finally, the Detailed Description explains how the adaptive adjustment process 366, a computerized function, operates to identify trends or patterns in various databases and as a result adjusts the weights of the associated rules in the rules database:

In response to information stored in the valid transaction database 334 and the invalid transaction database 332, the adaptive adjustment process 336 performs its operations to identify trends or patterns in such information. In response to such trends and patterns, the adaptive adjustment process 336 further performs its operations to initialize and adapt (e.g., modify or adjust) the rule weighting information in the rules database 302 (and, optionally, threshold information in the thresholds database 312), in order to improve a predictive accuracy of such information (in the rules database 302 and thresholds database 312) for the scoring process 306 and decision process 310. In that manner, in response to such adapted information, the scoring process 306 and decision process 310 achieve improved accuracy in determining whether a subsequent financial transaction request (submitted by a customer's user) is likely fraudulent, so that the scoring process 306 and decision process 310 more accurately predict whether the financial transaction request will ultimately prove to be fraudulent.

Originally-filed specification at page 6, line 30 through page 7 line 10 (emphasis added).

Thus, the specification discloses an adaptive weighting procedure that runs by itself, that is, automatically, on a computer to adjust weights associated with various databases. It is clear that at least the portions of the specification cited above provide express, implicit, or inherent disclosure to support the claim language “automatically modifying the weight of at least one of the plurality of rules based on the result.”

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw this rejection.

Claim Rejections – 35 U.S.C. § 101

Claims 1-28 and 97-116 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. However, in light of the amendments to the claims submitted herewith, Applicant respectfully submits that the rejection has been traversed.

For example, claim 1 and its dependent claims have been amended to make clear that the method is implemented using a “particular machine,” namely an “information handling system (‘IHS’), the IHS including a computer having an input device, a display device, a processor, a computer-readable medium, and a network interface, at least the processor and the network interface comprising electronic circuitry components.” Many of the steps of the method have been amended to demonstrate some of the ways in which the various components of the IHS are involved in performing the steps.

Similarly, amendments have been made to independent claims 13 and 97 and their respective dependent claims to demonstrate how the claimed methods are implemented using a "particular machine," i.e. an information handling system.

Support for the amendments can be found in the originally-filed application at least at page 2, line 18 through page 4, line 21, and Figures 1 and 2. Thus, no new matter is added.

Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection.

Claim Rejections – 35 U.S.C. § 103

Claims 1-28, 33-60 and 97-116 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2002/0099649 to Lee et al. ("Lee") in view of U.S. Publication No. 2002/0161711 to Sartor et al ("Sartor") and in further view of U.S. Patent No. 6,714,918 issued to Hillmer et al. ("Hillmer"). However, at least for the reasons presented herein, Applicant respectfully submits that the rejections are traversed. In responding to the rejections, Applicant makes no concession that any of the cited references are prior art, and Applicant reserves the right to antedate any reference at a later date and to present additional reasons why the claims are patentable.

The combination of references cited by the Examiner does not disclose, teach, or suggest the combination of elements of the claimed invention and, as such, the claims are not obvious in view of the combination of Lee in view of Sartor further in view of Hillmer. As indicated by the Examiner in the Office action, the combination of Lee and Sartor fails to disclose, teach, or suggest all of the elements of claims. However, Applicant respectfully submits that Hillmer fails to supply the deficiencies of the other references.

The present application discloses a plurality of rules that may be applied to a financial transaction request. In particular, the application provides for activating only a subset of the rules, based on whether the logic of the particular rule is satisfied by at least one element of the financial transaction, to adapt to the availability of varying financial information and to make the analysis of the likelihood of fraud more accurate:

FIG. 4 is a conceptual illustration of an organization of the rules database 302 according to an illustrative embodiment. As shown in FIG. 4, the rules database 302 stores various types of information, which are illustrative (not exhaustive) of information stored in the rules database 302. For one or more rules, the rules database 302 includes information about the rule's respective (a) number, (b) logic expression, and (c) weight. During execution of the scoring process 306, if a rule's

logic expression is satisfied by one or more elements of a financial transaction request's associated financial account information and transaction information, the IHS activates (e.g., triggers) the rule for contributing to the score (which indicates whether the financial transaction request is likely fraudulent). Conversely, if the rule's logic expression is not satisfied by the financial transaction request's associated financial account information and transaction information, the IHS does not so activate the rule for contributing to the score.

Originally-filed specification at page 8, lines 3-13.

The Examiner argues that Hillmer teaches “activat[ing] a subset of the rules based on the information in the first financial transaction request, each of the plurality of rules having a predetermined weight” and determining a first score “by calculating a sum of the weights of the activated rules and applying a mathematical formula using the sum.”

Hillmer discloses a system of fraud detection that is based on the type and number of products that are being purchased, with points being assigned based on the type of product and the number of units being purchased. Hillmer at col. 11, Table 2.0. Hillmer teaches a fraud multiplier database in which it appears that all factors are used for every transaction. The fraud multiplier score is then multiplied by the so-called SKU points that are accrued for the transaction based on the number and type of product being purchased. Hillmer at cols. 10-11.

However, Hillmer does not disclose, teach, or suggest “activat[ing] a subset of the rules based on the information in the first financial transaction request, each of the plurality of rules having a predetermined weight,” as recited in claim 1. Instead, Hillmer appears to use all of the rules for every transaction. In addition, it follows that Hillmer also does not disclose, teach, or suggest determining a first score “by calculating a sum of the weights of the activated rules and applying a mathematical formula using the sum,” also as recited in claim 1.

Thus, since Hillmer does not supply the deficiencies of the Lee and Sartor references, claim 1 is not obvious in view of this combination of references. For at least these reasons and because each claim recites additional patentable subject matter, dependent claims 2-12 are also allowable.

Independent claim 13 recites, among other features, determining a first score for a first financial transaction request by applying a plurality of rules to the first financial transaction request to “activate a subset of the rules based on the information in the first financial transaction

request” where the first score is determined by “calculating a sum of the weights of the activated rules and applying a mathematical formula using the sum.”

For at least the reasons given above for claim 1 and because claim 13 recites additional patentable subject matter, claim 13 is not obvious in view of the combination of Lee in view of Sartor further in view of Hillmer. Also, for at least the reason that each depends from an allowable independent claim, and because each claim recites additional patentable subject matter, dependent claims 14-28 are also allowable.

Independent claim 33 recites, among other features, determining whether the financial transaction request is likely fraudulent by applying a plurality of rules to the financial transaction request to “activate a subset of the rules based on the information in the first financial transaction request,” where each of the plurality of rules has a predetermined weight, and wherein a first score is generated by “calculating a sum of the weights of the activated rules and applying a mathematical formula using the sum.”

For at least the reasons given above for claim 1 and because claim 33 recites additional patentable subject matter, claim 33 is not obvious in view of the combination of Lee in view of Sartor further in view of Hillmer. Also, for at least the reason that each depends from an allowable independent claim, and because each claim recites additional patentable subject matter, dependent claims 34-44 are also allowable.

Independent claim 45 recites, among other features, determining whether a first financial transaction request is likely to be fraudulent by applying a plurality of rules to the first financial transaction request to “activate a subset of the rules based on the information in the first financial transaction request,” where each of the plurality of rules having a predetermined weight, and wherein a first score is generated by “calculating a sum of the weights of the activated rules and applying a mathematical formula using the sum.”

For at least the reasons given above for claim 1 and because claim 45 recites additional patentable subject matter, claim 45 is not obvious in view of the combination of Lee in view of Sartor further in view of Hillmer. Also, for at least the reason that each depends from an allowable independent claim, and because each claim recites additional patentable subject matter, dependent claims 46-60 are also allowable.

Independent claim 97 recites, among other features, automatically adjusting a predetermined weight of at least one of a plurality of rules based on an indication of whether a previous financial transaction request is likely to be fraudulent as determined based on a score and an actual outcome of the previous financial transaction request, the score of the previous financial transaction request being generated by applying a plurality of rules to the previous financial transaction to “activate a subset of the rules based on the information in the previous financial transaction” and “calculating a sum of the predetermined weights of the activated rules and applying a mathematical formula using the sum.”

For at least the reasons given above for claim 1 and because claim 97 recites additional patentable subject matter, claim 97 is not obvious in view of the combination of Lee in view of Sartor further in view of Hillmer. Also, for at least the reason that each depends from an allowable independent claim, and because each claim recites additional patentable subject matter, dependent claims 98-116 are also allowable.

CONCLUSION

In view of the foregoing, entry of this paper and allowance of the pending claims are respectfully requested. The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,

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